Should engineers get an MBA degree?

Georgia Tech College of Engineering

Working engineers who want to advance their education are faced with two potential options – an MBA or an advanced engineering degree. Ultimately, the choice depends on the individual and their career aspirations.

Engineers are problem solvers. They are strategic and analytical, examining complex issues from all angles. The qualitative and quantitative skill sets of an engineer already differentiate them when they leave school and start a career in the business world. From the start, an engineer's academic background and technical skills allow them to easily understand product design and build, enabling them to speak with customers, consult clients, and lead teams in a business setting.

But many engineers are faced with an important question: Should I get an advanced degree to move my career forward? Today, nearly a third of employers across the U.S. are bumping up education requirements for new hires, according to CareerBuilder. Companies are looking for candidates with a master's degree or higher to be innovative leaders with an eye towards strategy.

Two possible education paths are offered to the engineer working in industry — a master's in business administration (MBA) or an advanced engineering degree (master's and/or Ph.D.). And there are several factors to consider when making the decision.

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CareerBuilder

GAIN A COMPETITIVE ADVANTAGE

An engineering undergraduate degree already makes you an attractive employee; companies are looking for people with a technical background who can understand complex problems. But adding another degree to your education really gives you an edge. Both an MBA and advanced engineering degree differentiate you from the rest of the workforce, but in different ways.

A technical background instantly helps you relate to other employees who work on product engineering or research and development. With an MBA, you can act as a bridge between the tech experts and senior management team who make business decisions. Being able to speak these two languages, both technological and business, adds value to the team.

Shay Ashmon

B.S. ECE; MBA

Regional Manager, NCR

"My engineering degree and MBA enable me to understand the technology implications of what a company does, but also allow me to manage teams and make high-level decisions," said DeAndre Jones, consultant at CapGemini. "I can lead a team of developers and confidently speak about our work to clients or senior leadership."

"As an engineer, you're an analytical thinker and familiar with looking at issues from all angles," said Shay Ashmon, regional manager at NCR. "An MBA adds even more viewpoints, so it's complementary. I can speak to the design and tech aspects, but at the same time speak about accounting and finance to executives. My degrees bridge the gap between technical and non-technical departments."

An engineering degree coupled with an MBA provides a great mixture of education and creates a well-rounded employee. Some engineers feel they need to return to business school to learn a few of the skills needed to be a manager or team leader.

"After getting my undergrad in Civil Engineering from Tech, I joined the U.S. Coast Guard as a program manager," said Trevor Clark. "The technical skills are extremely important for problem solving, but I want to move into consulting, and I know I will need those business skills too. A huge component of an MBA is management, soft skills and networking, which will be instrumental in the consulting world."

Alternatively, some choose an advanced engineering degree to gain an advantage over other job applicants. Many research and development positions today require a master's degree or Ph.D. to even apply for the job. A thesis or dissertation experience also gives you technical writing abilities, a critical skill set in the engineering industry.

"Everyone applying to the research and development jobs I'm interested in has a master's, at least," said Matthew Orr, Ph.D. candidate at Georgia Tech. "I needed the advanced degree to stay competitive with my peers. The research and writing aspect of my degree enhances my communication skills as well and makes me a well-rounded candidate."

"At Pratt & Whitney, when complex engineering challenges arise, **my name always comes up as a person who can deal with it**. A master's means you spend less time doing standard analysis and more time developing tools and methods to solve problems outside of the typical scope of everyday work."

Phil Varney
Senior Structures Engineer
Pratt & Whitney

Once you return to industry, an advanced engineering degree can ensure you're assigned to more complex and interesting projects or customers. Having the additional engineering expertise alerts management that you are up to the task.

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KEY TAKEAWAY

Ultimately, having more education on your resume sets you apart from the competition, giving you a more marketable skill set. While an MBA enhances soft skills with leadership and management training, a technical degree provides the advanced skills needed for product development and research. Either degree will serve you well as your career develops.

ADVANCE YOUR CAREER

For many people, after working a few years, they consider returning to school for an advanced degree to enhance their career. Both an MBA and advanced engineering degree afford that opportunity. In fact, with an advanced degree, you can earn an up to 30 percent higher salary versus only having a bachelor's degree, according to the U.S. Census Bureau.

Many engineers feel an MBA will give them the management skills needed to progress in the workplace. They gain experience in marketing, strategy, accounting and finance disciplines needed to get promotions at their current jobs, or even pivot their careers.

"After my undergrad, I started out in cement manufacturing," said Katie Baldwin, who now works as a logistics manager at Amazon. "I decided I wanted to get into consulting or business, and an MBA was a way to get there. At Scheller, 95 percent of our professors come out of industry, so you learn from their experience. My goal

is to be a Fortune 500 CEO, and the MBA was necessary to get there."

Jason Alcedo, who was previously in the Peace Corps, is also pursuing an MBA to further his career. After spending time in Ghana, he gained an interest in the funding aspect of the Peace Corps. He saw that fundraising really depended on leadership responsibility and a strong set of management skills.

"My MBA has enabled me to grow my career with a toolkit that includes data analytics, operations and process optimization," said Alcedo. "That, combined with my undergraduate degree in Civil Engineering from Tech, puts in me in a good place to lead a non-profit focused on the developing world."

People skills are another important factor for career advancement. While engineers are expert problem solvers, they do not always learn the soft skills required for the business world. An MBA allows you to focus on people development, management skills and leadership, along with rounding out your business knowledge regarding marketing, finance and commercialization.

Sam Gollin, a current Scheller MBA student, believes that the skills gained in his program offer a more holistic understanding of the business. "While my engineering undergraduate degree provided me the opportunity to be successful as a project manager at Delta, the leadership development that goes on at Scheller reinforces the skills companies want to see and continues to help me grow in a leadership capacity," he said.

Stephanie Kalman, who currently works at The Home Depot as a manager, sought an MBA so she could understand the big picture. She realized she was using her ISyE degree to propose systems that could costs millions to implement, but it was those with general business knowledge and expertise that got to make the final decisions.

With an advanced degree — MBA or engineering — you can earn up to a 30% higher salary.

U.S. Census Bureau

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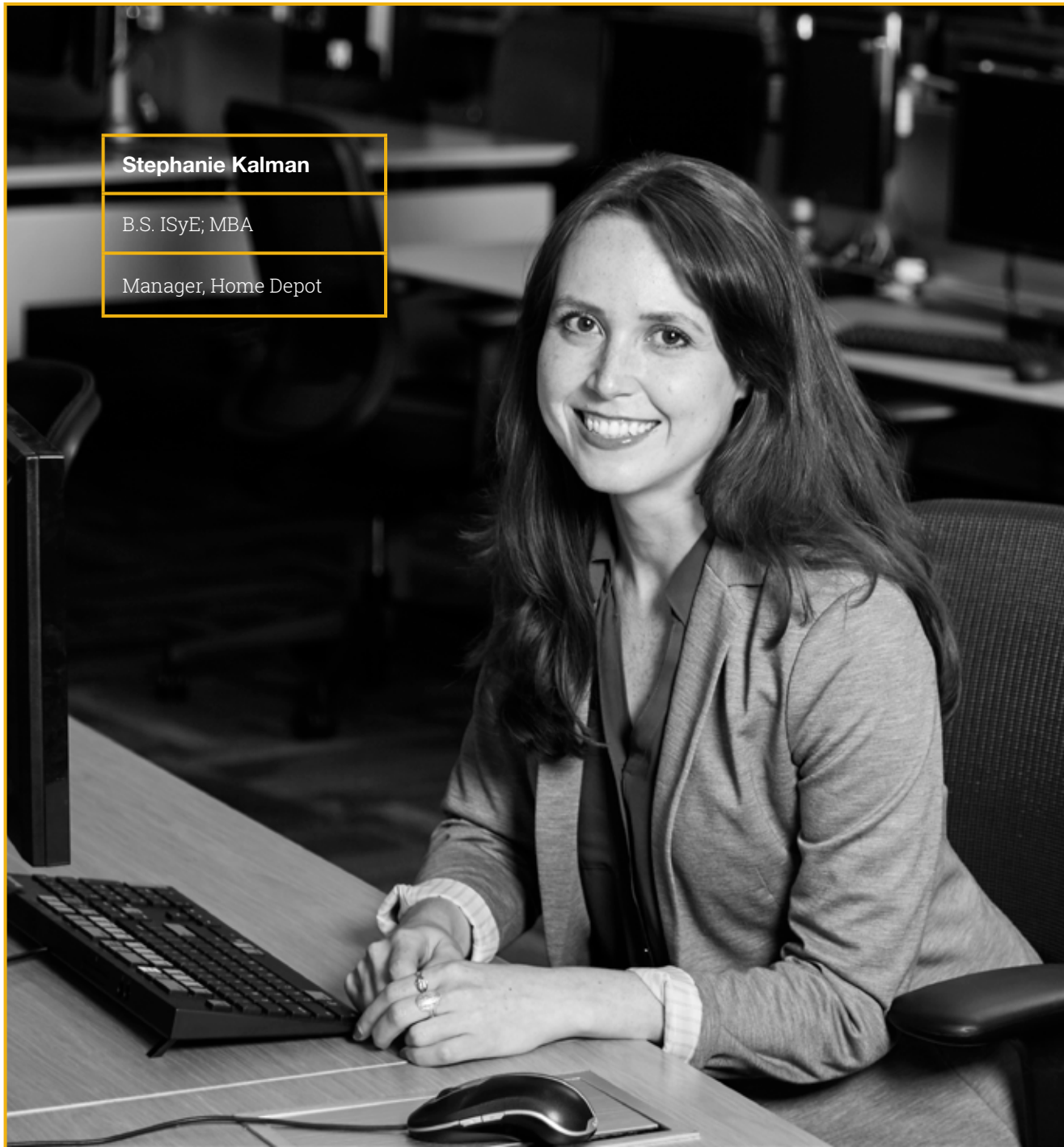
Stephanie Kalman
Manager
Home Depot



Wassim Selman

Ph.D. CE

President, Arcadis

"My MBA has given me the business expertise that will position me to be a leader and decision maker at The Home Depot," said Kalman. "My MBA has been fantastic to move my career forward, and I'm able to better communicate with team members, make more well-rounded decisions, and gain a broader view of how a company runs."

An advanced engineering degree also opens doors to advance your career, and a Tech degree in particular holds a lot of weigh in the engineering world. Understanding the technical side of any business helps improve your job performance. You can relate to other employees, while leading teams based on the expert knowledge you gained from your degree.

"My Ph.D. has helped me understand the technical side of our business," said Wassim Selman, infrastructure business line president at Arcadis. "I know what our people do and have an appreciation of it. In turn,

I earn respect as a leader because I can converse with them in technical terms. The same applies to clients – when I talk to them, I understand the project and can communicate the big picture."

Engineering consultants especially benefit from the advanced degree when interacting with clients. The problems that many firms tackle today are becoming increasingly diverse and unique, and with that, firms are looking for employees that have specific capabilities only learned in a master's or Ph.D. program.

"The problem-solving methodologies you develop when you get a master's or Ph.D. predispose you to look at problems with originality and an eye to completion," said Mike Houlihan, principal, Geosyntec Consultants. "You can apply a practical eye even though it's an uncommon problem. That makes you a viable consultant, increasing the value of your firm and opening up career opportunities."

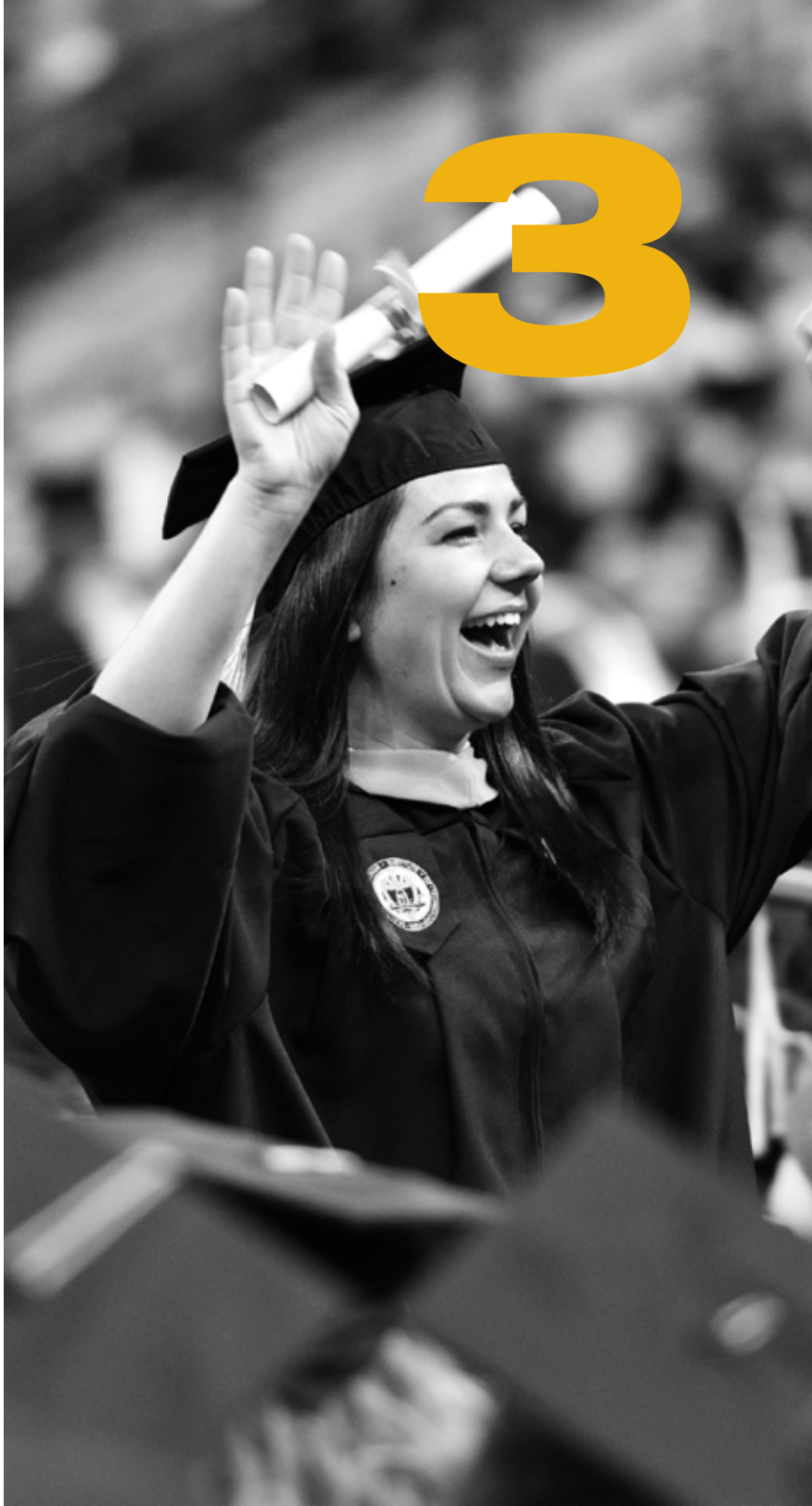
KEY TAKEAWAY

An advanced degree will get you farther in your field. An MBA gives you the tools to lead and manage, while an engineering degree positions you as an expert and company standout.

FOLLOW YOUR PASSION

When deciding which degree to pursue, it's critical to consider what you're passionate about. Both an MBA and advanced engineering degree take considerable time and money. Working before going back to school can help you determine the best career path. For some, it's about rising to the C-suite of corporate; for others, it's about starting their own company. The degree you pursue depends on your focus.

"My end goal is to start my own business after CapGemini," said Jones. "I knew that as an engineer, I wouldn't be fully equipped with the knowledge I needed to understand the business side of things. That's why I got my MBA."



Craig Green

Ph.D. ME

CTO, Carbice

Craig Green, CTO at Carbice, is also an entrepreneur, leveraging his master's and Ph.D. in engineering to create commercially viable products to help prevent electronic devices from overheating. "With my engineering degrees from Tech, I'm not limited in what I can accomplish. Grad school was essential for me to be doing what I do now at Carbice."

Ashmon is passionate about leading global teams at NCR. "Right now, I'm assigned to U.S. accounts, but I

would like more global responsibility. With Scheller's global business program, I'm well equipped to expand my role."

For Alcedo, it's non-profit work. "Cameroon needed civil engineers to help run clean water projects, so that's where I went. My MBA helps me make an even bigger impact from a high level."

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DeAndre Jones, Consultant, CapGemini

KEY TAKEAWAY

Regardless of the degree, pursue your passion. When you commit to what you're passionate about, either through an MBA or advanced engineering degree program, you pursue a path to achieve your career goals.

CONCLUSION

It's important to decide if you want to be a subject matter expert or a manager. That also helps make your decision. If you love engineering and being on the technical side of things, then an advanced engineering degree puts you at the top of your field. But, if you are excited about working at a macrolevel in business and managing teams or considering an entrepreneurial endeavor, an MBA is for you. Regardless of the path, your undergraduate engineering background provides problem-solving skills and critical thinking methodology that serve you well in any career.

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Georgia Tech College of Engineering